

FIREPLACE WITH WARMING SHELF

Field of the Invention

This invention relates to a fireplace. In particular, the invention relates to a gas fireplace with a warming shelf.

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Background of the Invention

Fireplaces, including gas fireplaces are well known. Generally, fireplaces are used for heating a room and for ambiance. However, it may be desirable to use a fireplace to warm other items.

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Summary of the Invention

The invention provides a fireplace having a warming shelf suitable for warming beverages, such as coffee, tea or hot cocoa; food items; and other items, for example, clothing, such as mittens or socks.

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The fireplace generally includes a firebox, a front wall and a shelf. The front wall is mounted to the firebox to define a combustion chamber. Preferably the interface between the front wall and the firebox is substantially airtight. More preferably, the front wall is made using a transparent material such as glass or heat resistant plastic. The fireplace also includes a shelf that is pivotally mounted to the front wall about a

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horizontal axis. Preferably, the shelf is made using a transparent material such as glass or heat resistant plastic. The shelf preferably rotates from between a closed position, in which the shelf is adjacent and substantially parallel to the front wall to an open position, in which the shelf is substantially perpendicular to the front wall. Even when the shelf is in an open position, the combustion chamber, defined by the front wall and the firebox

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remains inaccessible from behind the shelf, due to the presence of the front wall. The open shelf provides a suitable horizontal surface for placing items to be warmed, such as beverages, food, or clothing. In a preferred embodiment, the fireplace also includes doors that are pivotally mounted to the fireplace about a vertical axis. Preferably, the doors are positioned below the shelf. In this embodiment, the shelf and doors can be opened to

30 create a semi-enclosed space which is capable of trapping heat generated by the fireplace to further warm the shelf and any items placed thereon.

Brief Description of the Drawings

Fig. 1 is a front elevation view of a fireplace embodying the present invention.

Fig. 2 is a side elevation view of the fireplace in Fig. 1 in section taken along the line 2-2.

5 Fig. 3 is a top sectional view of the fireplace taken along the line 3-3 in Fig. 2.

Fig. 4 is a side elevation view of the fireplace with a door open.

Fig. 5 is a top view of the fireplace shown in Fig. 4.

Detailed Description

10 Referring now to the drawings wherein like reference characters refer to like parts, the fireplace 50 of the invention is shown in Figure 1. The fireplace 50 includes three major parts, namely a firebox 10; a front wall 11; and a shelf 12.

The firebox 10 includes side walls 15 and 16, a rear wall 17, a top 18, a front 20 and a back 21. The top 18 of the firebox 10 shown in Figure 1 is configured as a half-
15 dome. However, the top 18 can be created in any desirable configuration. For example, in an alternate embodiment (not shown), the top 18 of the firebox 10 can be formed by planar walls that slope downward from the front 20 of the firebox 10 and mate at the back 21 of the firebox 10 or planar walls that slope upward from the front of the firebox 10 and mate at the back 21 of the firebox. In yet another embodiment, the top 18 of the firebox
20 10 may be constructed in a horizontal position. Other configurations for the top 18 of the firebox 10 are readily apparent to those of skill in the art and are included within the scope of the invention.

A front wall 11 is mounted to the front 20 of the firebox 10. Preferably, the front wall 11 is formed from a heat resistant transparent material such as glass or heat resistant
25 plastic. More preferably, the front wall 11 is mounted to the firebox 10 such that the interface between the front wall 11 and the firebox is airtight or semi-airtight to prevent air loss from the room. If the interface between the firebox 10 and the front wall 11 is not substantially airtight, combustion air taken from the room may reduce the amount of oxygen in the room if the room is tightly sealed or, alternately, may create a partial
30 vacuum which takes in cold air or air from other parts of the building into the room to be heated, thus cooling the room to be heated. In one embodiment, the glass front wall 11 is capable of being removed from the firebox 10 or opened to provide access to the firebox 10. The front wall 11 can be planar (as shown in the Figures) or non-planar (not

shown). For example, the front wall 11 may be configured as a non-planar outwardly curved glass panel (not shown). Other configurations include non-planar glass panels having two or more flat sections (not shown). Other configurations are readily apparent to those of skill in the art and are included within the scope of this invention.

5 The firebox 10 and front wall 11 define a combustion chamber 30. A burner assembly (not shown) is located within the combustion chamber 30. Fresh air is delivered to the combustion chamber 30 by way of an air inlet vent (not shown). Exhaust gasses from the combustion chamber 30 pass out of the firebox 10 by way of an exhaust vent 14.

10 According to the invention, the fireplace 50 includes a shelf 12 mounted to the front wall 11. In a preferred embodiment, the shelf 12 is rotatably mounted to the front wall 11. Preferably, the shelf 12 is rotatably mounted to the front wall 11 about a horizontal axis. For example, the shelf 12 can be mounted to the front wall 11 using at least one hinge such that the shelf can occupy an "open" position wherein the shelf 12 is
15 positioned horizontally such that it is substantially perpendicular (at about 90°) to the front wall 11 (for example, see Figs. 2–5). Preferably the shelf 12 is configured to rotate to occupy a "closed" position wherein the shelf 12 is aligned adjacent to the front wall 11 in a position substantially parallel to the front wall 11 or to define a plane that is substantially parallel to the plane defined by the front wall 11(not shown). Generally, the
20 shelf 12 is configured to align with the contours of the front wall 11. The shelf 12 can be configured such that it is rotated "down" to its open position (i.e., horizontal or perpendicular to the front wall 11) and rotated "up" to a closed position (i.e., oriented vertically or parallel to the front wall 11). Alternately, the shelf 12 can be configured such that it is rotated "up" to an open position and rotated "down" to a closed position.
25 Preferably, a locking means is included to secure the shelf 12 in an open position. It may also be desirable to include a second locking means to secure the shelf 12 in a closed position. It should be noted that a shelf that is not hinged and therefore only occupies an "open" position is also included within the scope of the invention.

 It should be noted that, when the shelf 12 is in an open position, the front wall 11
30 of the fireplace 50 maintains a barrier between the firebox 10 and the room such that the combustion chamber 30 remains enclosed. As discussed above, it is important that the interface of the front wall 11 and the firebox 10 be airtight or semi-airtight and the combustion chamber remain enclosed to prevent oxygen or heat loss from the room in

which the fireplace 50 is situated. Thus, "opening" the shelf 12 merely provides an illusion of accessing the firebox 10, when in reality, the combustion chamber 30 remains enclosed. The shelf 12 functions essentially as a "false door" such that "opening" the shelf 12 does not actually open an enclosure. Rather, "opening" the shelf 12 merely
5 exposes the front wall 11 that is positioned interior to the shelf 12. Thus, "opening" the shelf 12 does not "open" an enclosure. Rather, "opening" the shelf 12 provides access to the substantially vertical front wall 11.

The open shelf 12 provides a suitable horizontal surface for placing items to be warmed, for example, beverages, food, or other items such as clothing. Preferably, the
10 shelf 12 is made of a transparent material, for example, glass or heat resistant plastic, such that the combustion chamber 30 or firebox 10 is visible when the shelf 12 is in a "closed" position.

The fireplace 50 may optionally include doors 13, positioned parallel and adjacent to the front wall 11 on the opposite side of the front wall 11 as the firebox 10. Preferably,
15 the doors 13 are mounted to the fireplace 50 at a position below the shelf 12. Preferably, the doors 13 are formed from a transparent material such as glass or heat resistant plastic such that the combustion chamber 30 is visible when the doors are in a closed position. Many configurations for fireplace doors are known in the art. For example, the doors 13 may include a single panel or a plurality of panels encased within a frame 22.
20 Conventional frames 22 used for fireplace doors are suitable. Preferably, the doors 13 can be opened and closed. The opening and closing of fireplace doors is conventional in the art. When the doors 13 are in their closed position, they are aligned adjacent to the front wall 11. Thus, if the front wall 11 is planar, the doors 13, in a closed position, preferably define a plane that is parallel to the plane defined by the front wall 11. If the
25 front wall 11 is curved outwardly, the doors 13 preferably follow the contours of the front wall 11. However, it is also conceivable that the front wall 11 may be planar, and the doors 13 may have a different configuration. For example the doors 13 may be curved outwardly. The doors 13 can be maintained in their closed position by conventional means, such as spring clips or magnetic plates. The doors 13 can also be put in an open
30 position, for example, as shown in Figures 4 and 5. As discussed in connection with the shelf 12 above, the glass doors 13 merely appear to provide access to the combustion chamber 30. In reality, even when the glass doors 13 are in an open position, the combustion chamber 30 remains inaccessible from behind the doors 13 due to the

presence of the front wall 11 which lies between the glass doors 13 and the combustion chamber.

5 Preferably, the glass doors are mounted to the front wall 11 or the side walls 15 and 16 of the firebox 10 around a vertical axis such that, when the doors 13 and the shelf 12 are in an open position, the doors 13 are oriented perpendicular to the shelf 13. With such an arrangement, it may be desirable to place the fireplace doors 13 in an open position in connection with securing the shelf 12 in an open position to create a semi-enclosed space which is capable of trapping heat generated by the fireplace to further warm the shelf 12 and any items placed thereon.

10 The foregoing description has been presented with respect to a gas fireplace shown in the accompanying figures. It will be appreciated by those skilled in the art that many other modifications of the structures, including size, shape and arrangement may be made without departing from the scope of the invention. For example, it is understood that the fireplace may include additional features and accessories. Furthermore, although 15 the invention is discussed primarily with respect to a gas fireplace, the concept is readily applied to conventional wood burning fireplaces. Accordingly, the present invention is not meant to be limited to the particular embodiments described above. Rather, the scope of the invention is meant to be defined by the following claims.